AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently amended) A cooling system for an electric motor, comprising:

a cooling duct formed between a cooling jacket and a separate component surface, the separate component surface defining at least a portion of a wall of the cooling duct, the cooling duct being configured to direct a cooling liquid along at least a portion of the separate component surface and draw heat from the electric motor, the cooling jacket at least partially defining an operating region of the electric motor;

an inlet port in fluid communication with the cooling duct, the inlet port being configured to receive the cooling liquid to introduce the cooling liquid to the cooling duct;

an outlet port in fluid communication with the cooling duct; and

an end plate adjacent the cooling jacket and having an annular ring and at least one fluid passage formed therein, the fluid passage being configured to direct cooling liquid directly from the annular ring into the operating region.

2. (Original) The cooling system of claim 1, wherein the separate component surface is an outer surface of a stator within the cooling jacket.

3. (Original) The cooling system of claim 2, wherein the cooling duct is spirally disposed thereby causing the cooling liquid to move at least partially in an axial direction of the motor along the outer surface of the stator.

4. (Original) The cooling system of claim 3, wherein the cooling jacket includes three cooling grooves formed in the cooling jacket, the three grooves forming the ducts.

5. (Original) The cooling system of claim 4, wherein the ducts are connected at intersections.

6. (Original) The cooling system of claim 1, wherein the separate component surface is an exterior sleeve disposed about the cooling jacket.

7. (Previously presented) The cooling system of claim 6, wherein the cooling duct is spirally disposed thereby causing the cooling liquid to move at least partially in an axial direction of the motor.

8. (Previously presented) The cooling system of claim 6, further including:

a second annular ring formed in the cooling jacket; and

at least one second passage extending from the second annular ring to the operating region defined at least in part by the cooling jacket.

9. (Previously presented) The cooling system of claim 8, wherein the second annular ring is in fluid communication with the cooling ducts.

10. (Previously presented) The cooling system of claim 9, wherein the at least one second passage is configured to direct a cooling liquid onto end windings of a stator.

11. (Currently amended) A cooling system for an electric motor, comprising:

a cooling duct formed between a cooling jacket and a separate component surface, the separate component surface defining at least a portion of a wall of the cooling duct, the cooling duct being configured to direct a cooling liquid along at least a portion of the separate component surface and draw heat from the electric motor, the cooling jacket at least partially defining an operating region of the electric motor;

an inlet port in fluid communication with the cooling duct, the inlet port being configured to receive the cooling liquid to introduce the cooling liquid to the cooling duct;

an outlet port in fluid communication with the cooling duct;

at least one passage [[in]] connected to an annular ring, the annular ring being in fluid communication with the cooling duct, wherein the at least one passage is configured to direct the cooling liquid into the operating region; and

a deflector within the operating region at the end of the at least one passage, the deflector being configured to deflect the spray of the cooling liquid onto end windings of a stator.

12. (Currently amended) An electric motor, comprising:

a cooling jacket having an inner surface with at least one cooling groove, the cooling jacket at least partially defining an operating region;

a stator disposed within the operating region, the stator having an outer surface in contact with at least a portion of the inner surface of the cooling jacket, wherein the cooling groove and the outer surface of the stator form a cooling duct,

wherein the cooling groove is spirally disposed such that the cooling duct is configured to direct cooling liquid at least partially in an axial direction of the motor; and

an end plate adjacent the cooling jacket and having an annular ring and at least one fluid passage formed therein, the fluid passage being configured to direct cooling liquid directly from the annular ring into the operating region.

13. (Original) The electric motor of claim 12, wherein the cooling jacket includes three cooling grooves.

14. (Original) The electric motor of claim 13, wherein the grooves are connected at intersections.

15. (Original) The electric motor of claim 12, wherein the at least one cooling groove has a groove width, and the distance between adjacent turns of the at least one cooling groove is a land width, and the groove width to land width ratio is between a ratio range of 2 to 3 and 3 to 2.

16. (Previously presented) The electric motor of claim 12, further including at least one second fluid passage configured to inject the cooling liquid into the operating region, wherein the stator is disposed within the operating region.

17. (Previously presented) The electric motor of claim 12, wherein the at least one fluid passage is configured to inject the cooling liquid onto at least one of the stator and a rotor within the stator.

18. (Currently amended) An electric motor, comprising:

a cooling jacket having an outer surface with at least one cooling groove and at least partially defining an operating region;

an exterior sleeve disposed around the cooling jacket, the exterior sleeve and the cooling groove defining a cooling duct;

a stator disposed within the operating region, the stator having an outer surface in contact with at least a portion of the inner surface of the cooling jacket; and

an end plate adjacent the cooling jacket and having an annular ring and ~~at least one~~ a plurality of fluid ~~passage~~ passages formed therein, the plurality of fluid

~~passage~~ passages being configured to direct fluid from the annular ring into the operating region.

19. (Previously presented) The electric motor of claim 18, further including second passages in the cooling jacket configured to inject the cooling liquid into the operating region at least partially defined by the inner surface of the cooling jacket, wherein the stator and a rotor are disposed within the operating region.

20. (Previously presented) The electric motor of claim 19, further including a second annular ring formed in the cooling jacket, the second passages extending from the second annular ring to the operating region defined at least in part by the cooling jacket.

21. (Previously presented) The electric motor of claim 20, wherein the second annular ring is in fluid communication with the cooling ducts.

22. (Previously presented) The electric motor of claim 21, wherein the second passages are configured to direct a cooling liquid onto end windings of the stator.

23. (Previously presented) The electric motor of claim 22, further including a deflector formed at the end of at least one second passage, the deflector

being configured to direct the spray of the cooling liquid onto the end windings of the stator.

24. (Original) The electric motor of claim 18, wherein the at least one cooling groove is spirally disposed and has a groove width, and the distance between adjacent turns of the at least one cooling groove is a land width, and the groove width to land width ratio is between a ratio range of 2 to 3 and 3 to 2.

25. (Currently amended) An electric motor, comprising:

a cooling jacket having an inner surface defining an operating region;

a stator disposed at least partially within the operating region, the stator having an inner and outer surface;

a rotor disposed within the stator, the rotor being configured to rotate within the stator;

at least one fluid passage configured to inject a cooling liquid into the operating region to cool the stator and rotor; and

an end plate attached at an end of the electric motor, the end plate having an annular ring formed therein, the fluid passage being configured to direct fluid directly from the annular ring into the operating region.

26. (Previously presented) The electric motor of claim 25, further including a second annular ring formed in the cooling jacket, and at least one second

fluid passage configured to direct fluid from the second annular ring into the operating region.

27. (Previously presented) The electric motor of claim 26, further including a cooling groove formed in the cooling jacket, the second annular ring being in communication with the cooling groove.

28. (Canceled)

29. (Previously presented) The electric motor of claim 25, further including a spiral cooling groove formed in the cooling jacket, the spiral cooling groove being in contact with the stator.

30. (New) A cooling system for an electric motor, comprising:

a cooling duct formed between a cooling jacket and a separate component surface, the separate component surface defining at least a portion of a wall of the cooling duct, the cooling duct being configured to direct a cooling liquid along at least a portion of the separate component surface and draw heat from the electric motor, the cooling jacket at least partially defining an operating region of the electric motor;

an inlet port in fluid communication with the cooling duct, the inlet port being configured to receive the cooling liquid to introduce the cooling liquid to the cooling duct;

an outlet port in fluid communication with the cooling duct; and

an end plate adjacent the cooling jacket and having an annular ring and a plurality of fluid passages formed therein, the plurality of fluid passages being configured to direct cooling liquid directly from the annular ring into the operating region.

31. (New) An electric motor, comprising:

a cooling jacket having an inner surface defining an operating region;

a stator disposed at least partially within the operating region, the stator having an inner and outer surface;

a rotor disposed within the stator, the rotor being configured to rotate within the stator;

a plurality of fluid passages configured to inject a cooling liquid into the operating region to cool the stator and rotor; and

an end plate attached at an end of the electric motor, the end plate having an annular ring formed therein, the plurality of fluid passages being configured to direct fluid directly from the annular ring into the operating region.